

## ABSTRACT OF THE DISCLOSURE

The present invention provides isolated nucleic acids encoding human SCA2  
5 protein, or fragments thereof, and isolated SCA2 proteins encoded thereby. Further  
provided are vectors containing invention nucleic acids, probes that hybridize thereto,  
host cells transformed therewith, antisense oligonucleotides thereto and compositions  
containing antibodies that specifically bind to invention polypeptides, as well as  
transgenic non-human mammals that express the invention protein. In addition,  
10 methods for diagnosing spinocerebellar Ataxia Type 2 are provided.